

ELECTRICAL JUNCTION BOX

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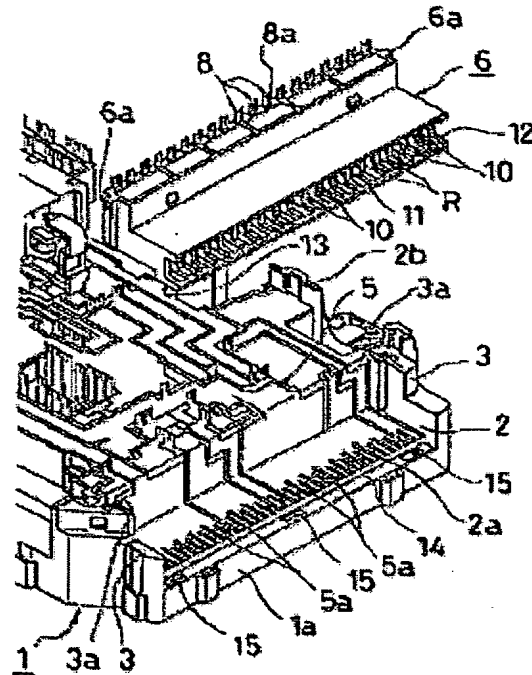
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Abstract of JP2000125449

PROBLEM TO BE SOLVED: To provide an electrical junction box for improving performance in mounting and removing a fuse and prevent defects in continuity of the fuse, by making an opening width and an opening height always constant at the plug inlet of the fuse. **SOLUTION:** In an electrical junction box a plurality of connection terminals 5a of a bus bar 5 are arranged on the side of a bottom face 2a of a recessed part 2 in a cover 1, and a fuse mounting block 6, in which a plurality of block terminals 8 are arranged, is engaged with the inside of the recessed part 2 with the wired bus bar 5 therein. A fuse-mounting part is formed in the vicinity of a jointing part between the cover 1 and the fuse mounting block 6. A fuse can be inserted freely into the fuse mounting part between each fuse connecting terminal 5a of the bus bar 5 and each fuse connection part of each block terminal 8. In this case, a fuse-inserting inlet (R) of the fuse-mounting part is formed at the fuse mounting block 6, and the fuse-mounting block 6 has a fitting part 13, while a receiving part 15 for fitting the fitting part 13 is formed at the cover 1.



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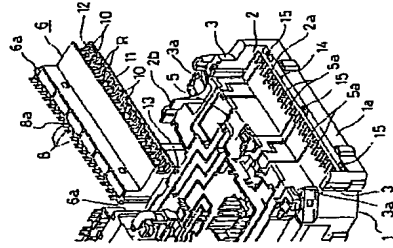
(54) ELECTRICAL JUNCTION BOX

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(57) Abstract:

PROBLEM TO BE SOLVED: To provide an electrical junction box for improving performance in mounting and removing a fuse and prevent defects in continuity of the fuse, by making an opening width and an opening height always constant at the plug inlet of the fuse.

SOLUTION: In an electrical junction box a plurality of connection terminals 5a of a bus bar 5 are arranged on the side of a bottom face 2a of a recessed part 2 in a cover 1, and a fuse mounting block 6, in which a plurality of block terminals 8 are arranged, is engaged with the inside of the recessed part 2 with the wired bus bar 5 therein. A fuse-mounting part is formed in the vicinity of a joining part between the cover 1 and the fuse mounting block 6. A fuse can be inserted freely into the fuse mounting part between each fuse connecting terminal 5a of the bus bar 5 and each fuse connection part of each block terminal 8. In this case, a fuse-inserting inlet (R) of the fuse-mounting part is formed at the fuse mounting



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2. Texts in the figures are not translated and shown as it is.

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FULL CONTENTS

[Claim(s)]

[Claim 1] Establish a crevice in the one side face side of covering, and two or more fuse contact button sections of busbar are installed in said one side face side of the base of this crevice side by side. The fuse mounting block which installed two or more block terminals side by side in said crevice on this busbar is fitted in. The electric junction box characterized by forming the fuse entry of said fuse attachment in said fuse mounting block in the electric junction box which counters mutually, was made to overlook each fuse contact button section of said busbar, and the fuse connection of each of said block terminal, and was used as the fuse attachment.

[Claim 2] The electric junction box characterized by preparing the catching part by which said locking part is stopped at the base side where said low wall section of the crevice of said covering contacts while the locking part was protruded on the low wall section which is an electric junction box according to claim 1, and forms said fuse entry of said fuse mounting block.

[Claim 3] The electric junction box characterized by being an electric junction box according to claim 2, having formed the base of the crevice of said covering in step shape, having bent and formed said busbar according to this step shape base, and *****(ing) this busbar by which bending formation was carried out so that the base of said crevice may be met.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to electric junction boxes, such as a junction box whose attachment and detachment of a fuse were enabled, at the busbar attached to covering, and a fuse mounting block.

[0002]

[Description of the Prior Art] As electric junction boxes, such as this kind of conventional junction box, there are some which are shown in drawing 6 - drawing 9. The amplification perspective view of the fuse mounting block by which drawing 6 is used for the exploded perspective view of the important section of an electric junction box, and drawing 7 is used for this joint box, the amplification perspective view of the block terminal with which drawing 8 is used for this fuse mounting block, and drawing 9 are the fragmentary perspective views near the fuse attachment of this joint box.

[0003] It is shown in drawing 6 -- as -- undercover one made of synthetic resin (covering) -- 1 is the crevice of abbreviation rectangular shape in which the one side face 1a side was formed low one step, and this crevice has become the block hold room 2. That is, the block hold room 2 is surrounded by step shape Base 2a and both-sides walls 3 and 3 by which busbar 5 mentioned later is *****(ed), and the upper part and transverse-plane side is released. The

guide slot 3a is formed in the inner surface of these both-sides walls 3 and 3, respectively, and the fuse mounting block 6 made of synthetic resin later mentioned using each of this guide slot 3a is positioned, and fits in. Moreover, *****(ed) side-by-side installation of the bottom bridge wall 4 is carried out to regular intervals at the one side face 1a side of the base 2a of the block hold room 2.

[0004] Busbar 5 is formed by bending the predetermined-shaped plates of flow metal according to the step shape base 2a of the block hold room 2, and is *****(ed) along the step shape base 2a top of this block hold room 2. Two or more side-by-side installation of the fuse contact button section 5a of compression bonded encapsulation is carried out at the end side of this busbar 5, and this each fuse contact button section 5a is arranged, respectively so that it may face between the adjoining bottom bridge walls 4 and 4 of each.

[0005] As shown in drawing 6 and drawing 7, the fuse mounting block 6 has the configuration it can detach [configuration] freely in the block hold room 2 (fitting and secession), and the guide projection 6a is formed in the side face of the both sides,

respectively. Moreover, *****(ed) two or more side-by-side installation of the top bridge wall 7 is carried out to regular intervals at the lower part of the fuse mounting block 6, and as shown in drawing 9, after the fuse mounting block 6 has fitted into the block hold room 2, the underside of the each top bridge wall 7 contacts the top face of the bottom bridge wall 4 of each. Two or more fuse entries (fuse cavity) R of a fuse attachment are formed with each bridge walls 7 and 4 of these both sides.

[0006] Moreover, the block terminal 8 is really formed in the fuse mounting block 6 by an insertion or outset shaping of synthetic resin. The block terminal 8 is equipped with the wire connection 8a of compression bonded encapsulation where pressure-welding connection of the electric wire of a patchboard 9 etc. is made, and the fuse side contact section 8b of compression bonded encapsulation as shown in drawing 8. In each wire connection 8a, from the top face of the fuse mounting block 6, up, a projection and each fuse connection 8b are stationed, respectively so that it may face between the adjoining each top bridge walls 7 and 7.

[0007] The patchboard 9 has a detachable configuration in fitting wall 2b of the top-face both sides of the under covering 1, and 2b, and is arranged in the upper part location of busbar 5 and the fuse mounting block 6. moreover -- the upper part of this patchboard 9 is blockaded with upper covering which is not illustrated -- this upper covering -- undercover one -- it is locked by 1.

[0008] In the above-mentioned composition, busbar 5 is *****(ed) on the step shape base 2a in the undercover block hold room 2 of 1. Next, if alignment of the guide projection 6a of the fuse mounting block 6 is carried out to each guide slot 3a of the both-sides walls 3 and 3 and the fuse mounting block 6 is fitted in the block hold room 2. While the fuse mounting block 6 is located on busbar 5, in contact with the top face of the bottom bridge wall 4 of each of the block hold room 2, two or more fuse entries R are formed for the underside of the each top bridge wall 7 of the fuse mounting block 6, respectively. next -- fitting etc. carrying out a patchboard 9 and putting upper covering from a top finally -- this upper covering -- undercover one -- assembly will be completed if locked in 1.

[0009] In addition, the analogous art about this electric junction box is indicated by the Tokuganhei9-89617 application documents.

[0010]

[Problem(s) to be Solved by the Invention] However, since the fuse entry R of the fuse attachment is formed of the block hold room 2 of undercover 1 as the fuse mounting block 6 in said conventional electric junction box, When a dimension error etc. is in either of both members 1 and 6 or external force is added, as an imaginary line shows in drawing 9, alignment of the underside of the each top bridge wall 7 of the fuse mounting block 6 may not be carried out to accuracy on the top face of the bottom bridge wall 4 of each of the block

hold room 2. For this reason, the substantial aperture width of the fuse entry R became small, and a possibility that trouble might come out was in the release of the fuse which is not illustrated.

[0011] Moreover, since migration in the secession direction (above) is only regulated with the lock of upper covering, if the fuse mounting block 6 in the fuse entry R has the dimension error of each part material 1 and 6 etc., it will become movable [a fuse block 6 / up] in the block hold room 2. Thus, if the migration to the upper part of the fuse mounting block 6 is permitted and this fuse mounting block 6 floats up. There was a possibility that the substantial height of the fuse entry R might become high, the contact state of a fuse, each fuse contact button section 5a of busbar 5, and the fuse connection 8b of each block terminal 8 might worsen, and switch-on might worsen.

[0012] Then, this invention is made that the above mentioned technical problem should be solved, becomes always constant [the substantial aperture width of the fuse entry of a fuse attachment], and it aims at offering the electric junction box which prevented the defective continuity of the fuse while the release of a fuse improves.

[0013]

[Means for Solving the Problem] Invention of Claim 1 establishes a crevice in the one side face side of covering, and installs two or more fuse contact button sections of busbar in said one side face side of the base of this crevice side by side. The fuse mounting block which installed two or more block terminals side by side in said crevice on this busbar is fitted in. In the electric junction box which counters mutually, was made to overlook each fuse contact button section of said busbar, and the fuse connection of each of said block terminal, and was used as the fuse attachment, it is characterized by forming the fuse entry of said fuse attachment in said fuse mounting block.

[0014] Since the fuse entry of the fuse attachment is formed in the fuse mounting block side even if it fits a fuse mounting block into the crevice of covering and a dimension error etc. is between covering and a fuse mounting block in this electric junction box, The bridge wall which forms a fuse entry like before does not cause a location gap by the interstitial segment.

[0015] Invention of Claim 2 is an electric junction box according to claim 1, and while it protrudes a locking part on the low wall section which forms said fuse entry of said fuse mounting block, it is characterized by preparing the catching part by which said locking part is stopped at the base side where said low wall section of the crevice of said covering contacts.

[0016] After the fuse mounting block has fitted into the crevice of covering in this electric junction box in addition to an operation of invention of Claim 1 Since the locking part of a fuse mounting block is stopped by the catching part of covering, even if the external force of the direction which secedes from the crevice of covering acts on a fuse mounting block, a fuse mounting block does not move in the secession direction.

[0017] Invention of Claim 3 is an electric junction box according to claim 2, it forms the base of the crevice of said covering in step shape, berds and forms said busbar according to this step shape base, and is characterized by ****(ing) this busbar by which bending formation was carried out so that the base of said crevice may be met.

[0018] It **** so that there may be this busbar along the step shape base of the crevice of covering disciplinarily in this electric junction box in addition to an operation of invention of Claim 2, without the sinusoid voice of busbar being in agreement with the level difference of the step shape base of the crevice of covering. Since the locking part of the fuse mounting block is stopped by the catching part of covering even if it acts on the external force of the direction which secedes from the crevice of covering to a fuse mounting block by this elastic restoration reaction force, a fuse mounting block does not move in the secession direction.

[0019]

[Embodiment of the Invention] One embodiment of this invention is hereafter explained

based on Drawings.

[0020] The exploded perspective view of the important section of electric junction boxes, such as a junction box which drawing 1 requires for one embodiment of this invention, The perspective view of the fuse mounting block by which drawing 2 is used for the partial exploded perspective view near the fuse entry of this joint box, and drawing 3 is used for this joint box, and drawing 4 are the fragmentary sectional views showing a locked position this fuse mounting block and undercover.

[0021] In drawing 1 - drawing 4, it is in this embodiment, and the same composition part as said conventional parallel gives the same sign to Drawings, omits that explanation, and explains only a different composition part. That is, projection formation of the bridge wall 10 of the dimension which included not only a top bridge wall but the bottom bridge wall of conventional parallel in the fuse mounting block 6 made of synthetic resin like conventional parallel is really carried out, and the low wall section 11 is really formed in the underside of two or more bridge walls 10. And projection formation of two or more fuse entries (fuse cavity) R of a fuse attachment is really carried out by two or more of these bridge walls 10 and low wall sections 11 at the fuse mounting block 6. Thereby, the lower part of a bridge wall 10 and the part of the low wall section 11 serve as the lobe 12 of the shape of a side-face L character which projects caudad rather than other parts. Moreover, projection formation of the flexible locking claw (locking part) 13 which projects caudad is really carried out at three places of the underside of the low wall section 11, and each of this locking claw 13 is really carrying out projection formation of the locking projection 13a of a side-face abbreviation triangle at that head.

[0022] undercover one made of synthetic resin (covering) -- [a bottom bridge wall like conventional parallel is not formed in the step shape base 2a of the block hold room (crevice) 2 of 1, and] This part serves as the minimum level difference section 14 still lower one step rather than other parts, and the lobe 12 of the fuse mounting block 6 enters into this minimum level difference section 14 in the fitting state of the fuse mounting block 6. The engagement hole 15 of the rectangle as a catching part where said flexible locking claw 13 is locked is formed in three places of this minimum level difference section 14, and as shown in drawing 4, this engagement hole 15 has really carried out projection formation of the engagement projection 15a which stops the locking projection 13a of a locking claw 13 to that inner surface. in order [namely,] to form two or more fuse entries R of a fuse attachment in conventional parallel -- the fuse mounting block 6 -- an each top bridge wall -- undercover one -- [since the bottom bridge wall of each was prepared in 1, respectively, there was no part in which a lock means is prepared, but] Since this embodiment really carried out projection formation of two or more whole fuse entries R at the fuse mounting block 6 side, the lock means 13 and 15 can be formed in both members 6 and 1, respectively.

[0023] Next, the assembly procedure of the above-mentioned composition is explained. Busbar 5 is ****(ed) along the step shape undercover base 2a top of the block hold room 2 of 1. Next, if alignment of the guide projection 6a of the fuse mounting block 6 is carried out to each guide slot 3a of the both-sides walls 3 and 3 and the fuse mounting block 6 is inserted in the block hold room 2 the lobe 12 of the fuse mounting block 6 enters into the minimum level difference section 14 by the side of the undercover one side face 1a of the block hold room 2 of 1 -- and the flexible locking claw section 13 of the fuse mounting block 6 -- undercover one -- the engagement hole 15 of 1 is entered. and the lobe 12 of the fuse mounting block 6 -- undercover ones -- if it is inserted in until it contacts the minimum level difference section 14 of the block hold room 2 of 1, the locking projection 13a of the above-mentioned locking claw 13 will be stopped by the engagement projection 15a of the above-mentioned engagement hole 15. next -- fitting etc. carrying out a patchboard 9 and putting upper covering from a top finally -- this upper covering -- undercover one -- assembly will be completed if locked in 1.

[0024] here -- undercover one -- since two or more fuse entries R of the fuse attachment are formed only in the fuse mounting block 6 side even if a dimension error etc. is between 1 and the fuse mounting block 6. The bridge wall 10 which forms the fuse entry R like before does not cause a location gap by the interstitial segment, the substantial aperture width of the fuse entry R becomes always fixed, and the release of the fuse which is not illustrated improves. Furthermore, since the mating face of the center of a fuse entry R like before cannot be seen from outside, aesthetics is raised.

[0025] moreover, after the fuse mounting block 6 has fitted in in the undercover block hold room 2 of 1 the flexible locking claw 13 of the fuse mounting block 6 -- undercover one -- since it is locked by the engagement hole 15 of 1. Even if the external force of the direction (upper part) which secedes from the block hold room 2 acts on the fuse mounting block 6, this fuse mounting block 6 does not move in the secession direction. The opening height of the fuse entry R can always be maintained uniformly, and each fuse contact button section 5a of busbar 5 and the fuse connection 8b of each block terminal 8 do not become a poor contact to a fuse. Furthermore, since it also has the low wall section 11 as a member which forms the fuse entry R, even if the fuse mounting block 6 displaces, the opening height of the fuse entry R can always be maintained uniformly.

[0026] On the other hand, drawing 5 is the outline side elevation of undercover 1 as the fuse mounting block 6 and busbar 5. In drawing 5 -- the sinusoid voice of busbar 5 -- undercover one -- [the level difference of the step shape base 2a of block hold room 2b of 1 / be / it / in agreement and] If it **** so that such busbar 5 may meet disciplinarily on the step shape undercover base 2a of the block hold room 2 of 1, this elastic restoration reaction force will act in the direction (above) which secedes from the block hold room 2 to the fuse mounting block 6; however, the locking claw 13 of the fuse mounting block 6 -- undercover one -- since it is locked by the engagement hole 15 of 1, the fuse mounting block 6 does not move in the secession direction (above). Thereby, the large tolerance of the angle at the time of the folding of busbar 5 can be taken.

[0027] In addition, according to said embodiment, projection formation of the locking claw as a locking part was really carried out at the Hube mounting block side, and the engagement hole of the rectangle as a catching part was formed in the covering side, but of course, it is good as an engagement projection which uses a locking part as a rectangular stop hole, and is locked by this stop hole in a catching part.

[0028]

[Effect of the Invention] Since the fuse entry of the fuse attachment was formed in the fuse mounting block side according to invention of Claim 1 as explained above. When a fuse mounting block is fitted into the crevice of covering, even if a dimension error etc. is between covering and a fuse mounting block, the bridge wall which forms a fuse entry like before does not cause a location gap by the interstitial segment. The substantial aperture width of a fuse entry is always uniformly maintainable. Thereby, the release of a fuse can be raised much more.

[0029] [according to invention of Claim 2 / in addition to the effect of the invention of Claim 1] after the fuse mounting block has fitted into the crevice of covering. Since the locking part of a fuse mounting block is stopped by the catching part of covering, even if the external force of the direction which secedes from the crevice of covering acts on a fuse mounting block, this fuse mounting block cannot move in the secession direction, and the opening height of a fuse entry can always be maintained uniformly. Thereby, each fuse contact button section of busbar and the fuse connection of each block terminal do not become a poor contact to a fuse. [0030] It **** so that there may be [according to invention of Claim 3] busbar along the step shape base of the crevice of covering disciplinarily in addition to the effect of the invention of Claim 2, without the sinusoid voice of busbar being in agreement with the level difference of the step shape base of the crevice of covering. Even if this elastic restoration reaction force

acts in the direction which secedes from the crevice of covering to a fuse mounting block, since the locking part of a fuse mounting block is stopped by the catching part of covering, a fuse mounting block does not move in the secession direction. Thereby, the large tolerance of the angle at the time of the folding of busbar can be taken.

[Brief Description of the Drawings]

[Drawing 1] It is the exploded perspective view of the important section of the electric junction box concerning one embodiment of this invention.

[Drawing 2] It is a partial exploded perspective view near the fuse entry of the above-mentioned electric junction box.

[Drawing 3] It is the perspective view of the fuse mounting block used for the above-mentioned electric junction box.

[Drawing 4] It is the sectional view showing a locked position the above-mentioned fuse mounting block and undercover.

[Drawing 5] They are the above-mentioned block for fuse mounting, busbar, and an undercover outline side elevation.

[Drawing 6] It is the exploded perspective view of the important section of the electric junction box of conventional parallel.

[Drawing 7] It is the amplification perspective view of the block for fuse mounting used for the electric junction box of the above-mentioned conventional parallel.

[Drawing 8] It is the amplification perspective view of a using [for the fuse mounting block of the above-mentioned conventional parallel] block terminal.

[Drawing 9] It is a fragmentary perspective view near the fuse attachment of the electric junction box of the above-mentioned conventional parallel.

[Description of Notations]

1 Undercover (Covering)

1a One side face

2 Block Hold Room (Crevice)

2a Base

5 Busbar

5a Fuse contact button section

6 Fuse Mounting Block

8 Block Terminal

8a Fuse connection

10 Bridge Wall

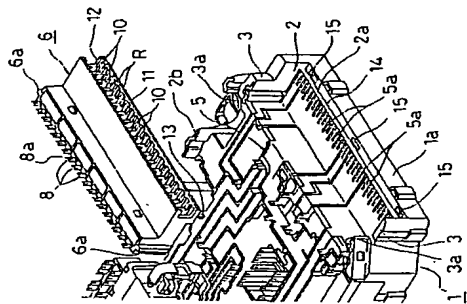
11 Low Wall Section

13 Locking Claw (Locking Part)

15 Engagement Hole (Catching Part)

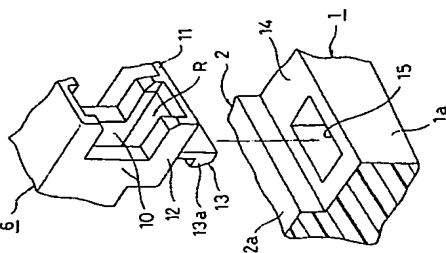
R Fuse entry

[Drawing 1]

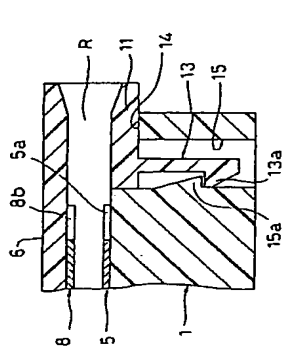


- 1...カバ
 2...凹部
 2a...底面
 5...グ
 6a...ヒューズ接続端子部
 6...ヒューズ接続ブロック
 8...ブロック端子
 8b...ヒューズ接続部
 13...係止部
 15...係合部
 R...ヒューズ部出口

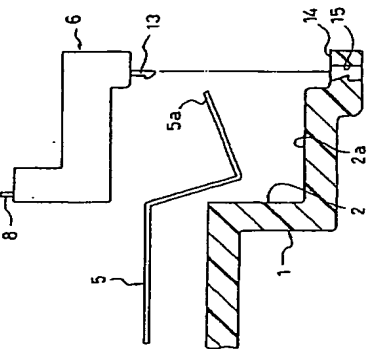
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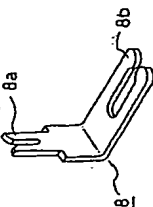
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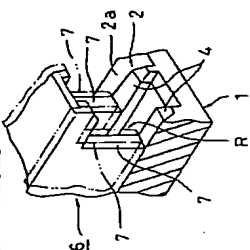
[Drawing 5]



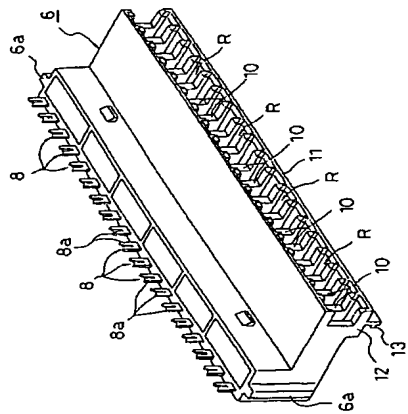
[Drawing 8]



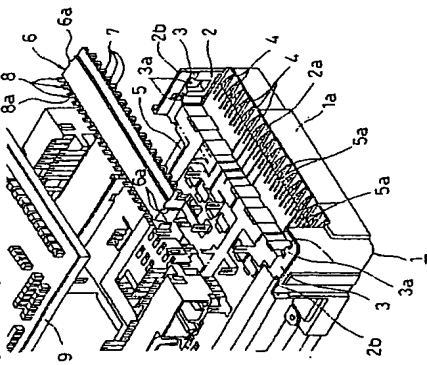
[Drawing 9]



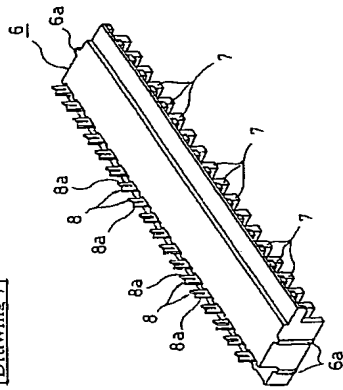
[Drawing 3]



[Drawing 6]



[Drawing 7]



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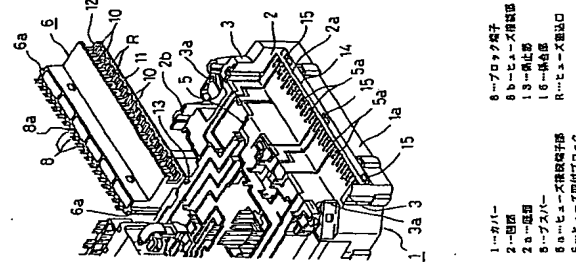
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(54)【発明の名称】電気接続箱

57)【要約】

【課題】 ヒューズ差込口の開口幅及び開口高さを常に一定とし、ヒューズの脱着性が向上すると共にヒューズの導通不良を防ぐ電気接続箱を提供する。

【解決手段】 カバー1の凹部2の底面2a側にブスバー5のヒューズ接続端子部5aを複数並設し、このブスバー5が配線された凹部2内にブロック端子8を複数並設したと見做したとき、ヒューズ取付ブロック6を嵌合し、カバー1とヒューズ取付ブロック6との接合面所付近にヒューズ取付部7を形成し、このヒューズ取付部よりブスバー5の各ヒューズ接続端子部5aと各ブロック端子8のヒューズ接続部間にヒューズを差込自在にした電気接線槽におい、ヒューズ取付部のヒューズ差込口Rをヒューズ取付ブロック6に形成し、このヒューズ取付ブロック6に係合部13を設け、カバー1に係止部14が係止される係止部15を設けた。



材1、6のいずれかに寸法調整等があったり、外力が加わった場合には、図9にて仮線で示すように、ヒューズ取付ブロック6の各上仕切壁7の下面がブロック収容室2の各下仕切壁4の上面に正確に位置合わせされないことがある。このため、ヒューズ差込口Rの実質的な開口幅が小さくなり、図示しないヒューズの脱着性に支障がでる虞があった。

【0011】また、ヒューズ差込口R内におけるヒューズ取付ブロック6は、単にアッパーカーバーのロックにより脱脱方向（上方）への移動が規制されているにすぎないため、各部材1、6の寸法調整等があるとヒューズ取付ブロック6はブロック収容室2内で上方に移動可能となる。このようにヒューズ取付ブロック6の上方への移動が許容され、較ヒューズ取付ブロック6が上方に浮くと、ヒューズ差込口Rの実質的な高さが高くなって、ヒューズとスプアー5の各ヒューズ接続端子部5aと各ブロック端子8のヒューズ接続部8bとの接触状態が悪くなり、導通状態が悪くなる虞があった。

【0012】そこで、本発明は、前記した課題を解決すべくなされたものであり、ヒューズ取付部のヒューズ差込口の真質的な開口幅が一定となり、ヒューズの脱着性が向上すると共にヒューズの導通不良を防止した電気接続箱を提供することを目的とする。

【0013】

【課題を解決するための手段】請求項1の発明は、カバの一側面側に凹部を設け、この凹部の底面の前記一側面にスプアーのヒューズ接続端子部を複数並設し、このスプアーの上の前記凹部内にブロック端子を複数並設したヒューズ取付ブロックを嵌合し、前記スプアーの各ヒューズ接続端子部と前記各ブロック端子のヒューズ接続部とを互いに向向して噛ませてヒューズ取付部としての電気接続箱において、前記ヒューズ取付部のヒューズ差込口を前記ヒューズ取付ブロックに形成したことを特徴とする。

【0014】この電気接続箱では、カバの凹部にヒューズ取付ブロックを嵌合し、カバとヒューズ取付ブロックとの間に寸法調整等があってもヒューズ取付部のヒューズ差込口にヒューズ取付ブロック側に形成されているため、従来のようにヒューズ差込口を形成する仕切壁とその中間部分で位置ずれを起こすことがない。

【0015】請求項2の発明は、請求項1記載の電気接続箱であって、前記ヒューズ取付ブロックの前記ヒューズ差込口を形成する下壁部に係止部を突設する一方、前記カバの凹部の前記下壁部が当接する底面側に前記係止部が係止される係合部を設けたことを特徴とする。

【0016】この電気接続箱では、請求項1の発明の作用に加え、ヒューズ取付ブロックがカバの凹部に嵌合された状態では、ヒューズ取付ブロックの係止部がカバの一の係合部に係止され、ヒューズ取付ブロックにカバの凹部から離脱する方向の外力が作用してもヒューズ

ズ取付ブロックが離脱方向に移動することがない。
【0017】請求項3の発明は、請求項2記載の電気接続箱であって、前記カバの凹部の底面を段差状に形成し、この段差状の底面に合わせて前記スプアーを折り曲げ形成し、この折り曲げ形成されたスプアーを前記凹部の底面に沿うように配線したことを特徴とする。

【0018】この電気接続箱では、請求項2の発明の作用に加え、スプアーの折曲状態がカバの凹部の段差状の底面の段差に一致せずに該スプアーが矯正的にカバの凹部の段差状の底面に沿うように配線され、この弾性復帰反力でヒューズ取付ブロックにカバの凹部から離脱する方向の外力に作用してもヒューズ取付ブロックの係止部がカバの係合部に係止されているため、ヒューズ取付ブロックが離脱方向に移動することがない。

【0019】

【発明の実施形態】以下、本発明の一実施形態を断面に基づいて説明する。

【0020】図1は本発明の一実施形態に係るジャンクジョンプラケット等の電気接続箱の要部の分解斜視図、図2は同接続箱のヒューズ差込口付近の部分分解斜視図、図3は同接続箱に用いられるヒューズ取付ブロックの斜視図、図4は同ヒューズ取付ブロックとアンダーカバとのロック状態を示す部分断面図である。

【0021】図1～図4において、この実施形態にあって前記従来例と同一構成箇所は図面に同一符号を付してその説明を省略し、異なる構成箇所のみを説明する。即ち、合成樹脂製のヒューズ取付ブロック6には従来例のように上仕切壁10が一体突出形成され、且つ、複数の寸法仕切壁10が一体突出形成され、且つ、複数の仕切壁10の下面に下壁部11が一体形成されている。そして、この複数の仕切壁10及び下壁部11によってヒューズ取付部の複数のヒューズ差込口（ヒューズキャビティ）Rがヒューズ取付ブロック6に一体突出形成されている。これにより、仕切壁10の下方及び下壁部11の箇所は他の箇所よりも下方に突出する断面形状の突出部12となっている。また、下壁部11の下面の3か所には下方に突出する可撓性の係止爪（係止部）13が一体突出形成されており、この各係止爪13はその先端に側面略三角形の係止突起13aを一体突出形成している。

【0022】合成樹脂製のアンダーカバ（カバ）1は、ブロック収容室（凹部）2の段差状の底面2には従来例のような下仕切壁が形成されておらず、この部分は他の箇所よりも一段更に低い最低段差部14となっている。ヒューズ取付ブロック6の嵌合状態ではこの最低段差部14にヒューズ取付ブロック6の突出部12が入り込むようになっている。この最低段差部14の3か所には前記可撓性の係止爪13がロックされる係合部として、該係止爪15はその内面に係止爪13の係止突起1

3aを係止する係合突起15aを一体突出形成してある。即ち、従来例においては、ヒューズ取付部の複数のヒューズ差込口Rを形成するためにヒューズ取付ブロック6に各上仕切壁を、アンダーカバ1に各下仕切壁をそれぞれ設けたため、ロック手段を設ける箇所がなかったが、本実施形態はヒューズ取付ブロック6側に複数のヒューズ差込口Rの全体を一体突出形成したので、双方の部材6、1にロック手段13、15をそれぞれ設けることができるようにしたものである。

【0023】次に、上記構成の組付け手順を説明する。アンダーカバ1のブロック収容室2の段差状の底面2aに沿ってスプアー5を配線し、次に、ヒューズ取付ブロック6のガイド突起6aを両側壁3、3の各ガイド溝3aに位置合わせし、ヒューズ取付ブロック6をブロック収容室2内に嵌め込むと、ヒューズ取付ブロック6の突出部12がアンダーカバ1のブロック収容室2の側面1a側の最低段差部14に入り込み、且つ、ヒューズ取付ブロック6の可撓性の係止爪部13がアンダーカバ1の係合孔15に入り込む。そして、ヒューズ取付ブロック6の突出部12がアンダーカバ1のブロック収容室2の側面1a側の最低段差部14に当接するまで嵌め込まれると、上記係止爪13の係止突起13aが上記係合孔15の係合突起15aに係止される。次に、配線部9を嵌合等し、最後にアッパーカーバーを上から被せ該アッパーカーバーをアンダーカバ1にロックすれば組付けが完了する。

【0024】ここで、アンダーカバ1とヒューズ取付ブロック6との間に寸法調整等があってもヒューズ取付部の複数のヒューズ差込口Rがヒューズ取付ブロック6側にのみ形成されているため、従来のようにヒューズ差込口Rを形成する仕切壁10がその中間部分で位置ずれを起こすことがなく、ヒューズ差込口Rの真質的な開口幅が常に一定となり、図示しないヒューズの脱着性が向上する。さらに、従来のようなヒューズ差込口Rの中央の合わせ面が外から見えないので、審美性が高められる。

【0025】また、ヒューズ取付ブロック6がアンダーカバ1のブロック収容室2内に嵌合された状態では、ヒューズ取付ブロック6の可撓性の係止爪13がアンダーカバ1の係合孔15にロックされるため、ヒューズ取付ブロック6にブロック収容室2から離脱する方向（上方）の外力が作用しても該ヒューズ取付ブロック6が離脱方向に移動することがなく、ヒューズ差込口Rの開口高さを常に一定に維持することができ、スプアー5の各ヒューズ接続端子部5aと各ブロック端子8のヒューズ接続部8bがヒューズ5に対して接触不良にならな

い。さらに、ヒューズ差込口Rを形成する部材として下壁部11をも有するので、仮にヒューズ取付ブロック6が変位してもヒューズ差込口Rの開口高さを常に一定に維持することができる。

【0026】一方、図5はヒューズ取付ブロック6とスプアー5とアンダーカバ1の概略側面図である。図5において、スプアー5の折曲状態はアンダーカバ1のブロック収容室2bの段差状の底面2aの段差に一致しておらず、このようなスプアー5が矯正的にアンダーカバ1のブロック収容室2の段差状の底面2a上に沿うように配線されると、この弾性復帰反力がヒューズ取付ブロック6にブロック収容室2から離脱する方向（上方）に作用する。しかし、ヒューズ取付ブロック6の係止爪13がアンダーカバ1の係合孔15にロックされているため、ヒューズ取付ブロック6が離脱方向（上方）に移動することがない。これにより、スプアー5の折曲加工時の角度の公差を大きく取ることができる。

【0027】尚、前記実施形態によれば、ヒューズ取付ブロック側に係止部としての係止爪を一体突出形成し、カバ側に係合部としての矩形的係合孔を形成したが、係止部を矩形的係止孔とし、係合部を較係止孔にロックされる係合突起として良いことは勿論である。

【0028】

【発明の効果】以上説明したように、請求項1の発明によれば、ヒューズ取付部のヒューズ差込口をヒューズ取付ブロック側に形成したので、カバの凹部にヒューズ取付ブロックを嵌合した場合に、カバとヒューズ取付ブロックとの間に寸法調整等があっても従来のようにヒューズ差込口を形成する仕切壁がその中間部分で位置ずれを起こすことがなく、ヒューズ差込口の真質的な開口幅を常に一定に維持することができ、これにより、ヒューズの脱着性をより一段と向上させることができる。

【0029】請求項2の発明によれば、請求項1の発明の効果に加え、ヒューズ取付ブロックがカバの凹部に嵌合された状態では、ヒューズ取付ブロックの係止部がカバの係合部に係止されるため、ヒューズ取付ブロックにカバの凹部から離脱する方向の外力が作用しても該ヒューズ取付ブロックが離脱方向に移動することがなく、ヒューズ差込口の開口高さを常に一定に維持することができ、スプアーの各ヒューズの各ヒューズ接続端子部と各ブロック端子のヒューズ接続部がヒューズに対して接触不良にならな

【0030】請求項3の発明によれば、請求項2の発明の効果に加え、スプアーの折曲状態がカバの凹部の段差状の底面の段差に一致せずにスプアーが矯正的にカバの凹部の段差状の底面に沿うように配線され、この弾性復帰反力がヒューズ取付ブロックにカバの凹部から離脱する方向に作用しても、ヒューズ取付ブロックの係止部がカバの係合部に係止されるため、ヒューズ取付ブロックが離脱方向に移動することがない。これにより、スプアーの折曲加工時の角度の公差を大きく取ることができる。

【図面の簡単な説明】

【図1】本発明の一実施形態に係る電気接続箱の要部の

分解斜視図である。

【図2】上記電気接続箱のヒューズ差込口付近の部分分解斜視図である。

【図3】上記電気接続箱に用いられるヒューズ取付ブロックの斜視図である。

【図4】上記ヒューズ取付ブロックとアンダーカバーとのロック状態を示す断面図である。

【図5】上記ヒューズ取付ブロックとプスバーとアンダーカバーの概略側面図である。

【図6】従来例の電気接続箱の要部の分解斜視図である。

【図7】上記従来例の電気接続箱に用いられるヒューズ取付ブロックの拡大斜視図である。

【図8】上記従来例のヒューズ取付ブロックに用いられるブロック端子の拡大斜視図である。

【図9】上記従来例の電気接続箱のヒューズ取付部付近*

*の部分斜視図である。

【符号の説明】

1 アンダーカバー（カバー）

1a 一側面

2 ブロック収容室（凹部）

2a 底面

5 プスバー

5a ヒューズ接続端子部

6 ヒューズ取付ブロック

8 ブロック端子

8a ヒューズ接続部

10 仕切壁

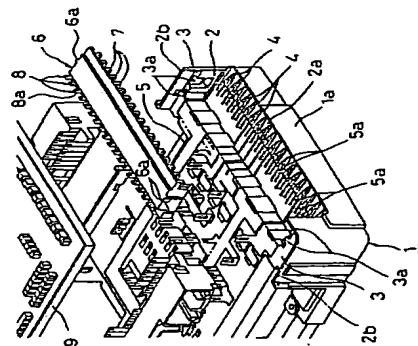
11 下壁部

13 係止爪（係止部）

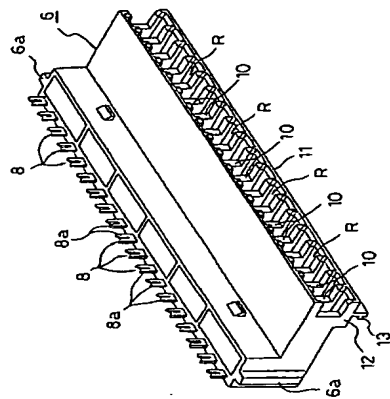
15 係合孔（係合部）

R ヒューズ差込口

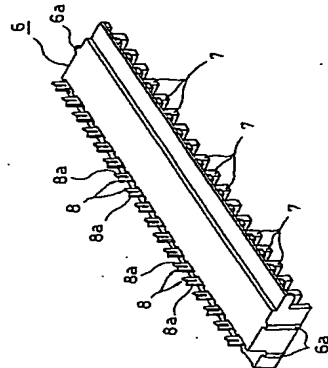
【図6】



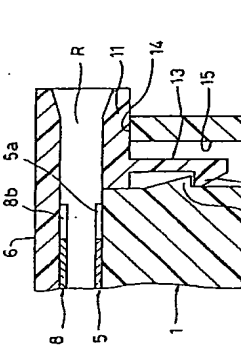
【図3】



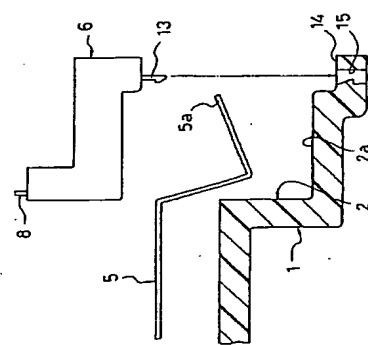
【図7】



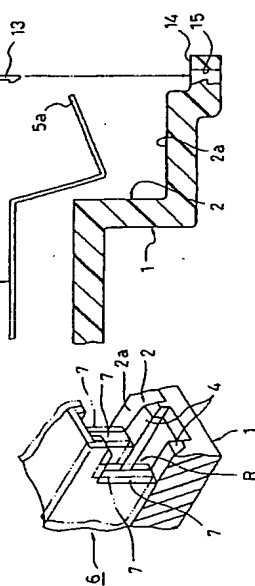
【図4】



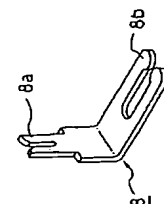
【図5】



【図9】



【図8】



1...カバー
2...凹部
2a...底面
5...プスバー
5a...ヒューズ接続端子部
6...ヒューズ取付ブロック
8...ブロック端子
8a...ヒューズ接続部
13...係止部
15...係合部
R...ヒューズ差込口